WORKMEN'S COMPENSATION—DISCUSSION

POWERS HAPGOOD.—In the bituminous coal fields of central Pennsylvania there exist striking illustrations of the ways in which compensation legislation at times fails to accomplish its purpose. The miners of this section are for the most part members of District No. 2 of the United Mine Workers, but, unlike the miners of the anthracite districts, they are not protected by the union in respect to their compensation rights. For this reason the miners who are injured and the widows of those who have been killed often are taken advantage of by self-insured coal operators or insurance carriers.

James Mark, the vice-president of District No. 2, in a plea before a district convention for union action on this matter, voiced the estimate that the miners of this district lose at least half a million dollars a year in compensation which is rightfully theirs. It was because of this statement that I was sent to central Pennsylvania last May, by the Bureau of Industrial Research of New York, to find out if there were really any concrete instances in which miners are losing compensation.

Soon after my arrival in the coal fields I happened to be in the waiting-room of an attorney who handles cases for miners who are not able to get compensation themselves. An old Slavic miner was waiting to see the attorney, and I had a talk with him. He had his right arm hung in a sling made out of an old suspender. There seemed to be scarcely any connection between the upper and lower parts of his arm, other than the old blue cotton shirt which he wore, as he could swing the lower part of his arm like a pendulum at a point a few inches above the elbow. He could twist his arm in all directions at another point, a couple of inches below the shoulder. It was obvious that his arm was forever made useless by the rock which fell from the roof of the mine on April 3, 1919. Yet at the time I saw him, over two years after his accident, he had not received the greater part of the compensation due him. This old miner had been forced to eke out his existence for some time as a beggar by showing his arm from house to house and asking for assistance. Finally he had come to the attorney and asked him to fight his case for him, and he was in the office at the time I saw him to learn the result.

The attorney had just been informed that he had won compensation for the miner for the loss of an arm. I asked him, when I was admitted into his private room, if he would be willing to tell me what he was going to charge the old man for his services. The attorney replied that at least $200, possibly more, would be taken out of the miner's compensation as his fee.

I was greatly surprised that the attorney admitted the fee in this case so readily, but in the course of our conversation it developed

that he was glad to have it known how badly the compensation situation was being handled in the coal fields of central Pennsylvania. He does not want to handle compensation cases, as he can spend his time more profitably in other kinds of work. When injured miners and widows come to him with their stories of unfair treatment, however, he feels that he must take up the cases; but if he wins compensation for them he feels that he is entitled to reimburse himself for the expenses which he undergoes in fighting the cases and for the losses he sustains by transferring his energies from other work. For the welfare of the miners he believes that something should be done to eliminate the great expense which individual workers have to bear in getting their compensation, and, at the time I saw him he gave me the details of other cases in which miners or their widows had lost heavily because of the necessity of paying attorney fees. He told me that it will cost one widow with four young children, for whom he has recently won compensation after a hard fight, close to $1000 before she pays all the expenses of obtaining compensation. She will have left only about $5000 on which to support herself and bring up her young children. This attorney, and others whom I saw later, told me of other cases in which it cost widows or miners from $300 to $1000 to get compensation.

The expense of hiring attorneys in contested cases is not the only way in which miners and widows lose compensation. By talking with injured miners in their homes, I found cases in which they had not received compensation because they did not understand their rights under the law and had meekly submitted when the companies or their doctors had told them that they were not entitled to compensation. This is especially true among the foreign born and non-English speaking miners, who can easily be taken advantage of.

Take the case of Mike V., for instance, a Hungarian who told me his story as we sat on a cot in his rough little home. On January 26, 1920, he received a naval rupture when he was lifting a mine car onto the track that had come off when he was dropping it down the grade from his room. Five days after the accident he went to the hospital and on February 7 he was operated on by Dr. H———. He spent three weeks and five days in the hospital, which cost him $45, and he still owes the doctor $75 for the operation. He was not able to go back to work until May, and was thus due three months' compensation, as well as the cost of hospital and medical services for the first thirty days of his trouble. Altogether this would have come to about $250.

A few weeks after he came out of the hospital, Mr. V. called on Dr. H. and asked him to put in a report so that he could get compensation. Mr. V. told me that the doctor answered his request by

saying. "No, no we don't pay nothing for rupture." Because of this he went home, believing that it was impossible for him to get compensation, and for this reason he did not talk about his case any more until he told it to me.

I went to see Dr. H. and asked him if Mr. V's story was true and if he had told him that there was no compensation paid for rupture. He replied that he had told the injured miner that "there is nothing paid for rupture when it isn't gotten at work," and he went on to say that he had understood Mr. V. to say that he had been bothered with this rupture for some time and that he thought it was time he was getting an operation. It was his understanding that Mr. V's accident happened a long time before.

This misunderstanding is explained by the fact that Mr. V. has great difficulty in making himself understood or in understanding other people. When I was questioning him he often said yes when it was obvious that he meant no, and he said no when he meant yes. Several times I asked him if certain facts were true and he would nod his head vigorously and say yes and then I would ask him—"You say these facts are not true?"—and he would nod his head just as vigorously and say yes. It was obvious to me that he does not understand English well and that he had misunderstood the doctor's statement that "no compensation is paid for rupture when it wasn't gotten at work" as meaning that "we don't pay nothing for rupture."

When I told him that Dr. H. had said that he told him that he had been ruptured a long time ago, Mr. V. did not flare up and call the doctor a liar, but he shook his big good-natured head and said—"No, Doctor he make mistake. I told him I get ruptured in mine when I lift car."

It is not surprising that Dr. H. misunderstood Mr. V's description of the accident. It was all I could do in careful questioning to understand his broken English, and on some points I had to get an assistant board member of the union to act as interpreter for me.

Mr. M. (the interpreter and union officer), when he found out about the case, was going to try to get compensation for him until he found out that under the law cases are barred if a claim petition for compensation has not been filed within one year from the date of injury. Thus Mr. V. has forever lost the compensation that was due him, and his wife and six little children have suffered during the time he was out of work when $12 a week would have helped them greatly.

Miners and widows also often lose compensation because they attempt to fight their own cases without attorneys and are unable to prove their claims before the compensation referee. If an injured miner is not given compensation by his employers or the insurance carrier, he is entitled to file a claim petition with the Workmen's Com-

pensation Bureau, and the case then comes to a hearing before the referee in the locality. Many miners and widows lose their cases, when compensation is justly due them, because of their own ignorance or the ignorance of the witnesses. They don't know how to answer questions so as to do justice to their cases and in cross examination, foreign born people especially, get tangled up in their answers and say things they do not mean.

One of the compensation referees told me that frequently he had to decide cases against the miners and widows, although he felt that they really merited compensation. He said he had to decide cases strictly on the basis of the evidence given before him at the hearings, and, while he might feel that the claimants deserved compensation, he can not give it to them unless the evidence fully warrants it. Often company lawyers are so clever that the evidence does not warrant awarding compensation, although if the whole truth were brought out at the hearings the settlements of the cases would be different.

The company doctors are a great hindrance to the miners in getting compensation. While they are paid by the men through the doctor's fees which the companies collect from their wages, they are employed by the companies and as a consequence many of them are subservient to them. A compensation referee told me that in all the disputed cases which have come before him he has never yet seen a company doctor testify in favor of a miner or a widow. But he said that in almost every case a company doctor or several of them give medical testimony to the effect that the case in question is not compensable. To oppose this testimony, miners have to pay the expense of going to other doctors for examinations and of bringing them to the hearings to testify in their behalf.

I have already spoken of three ways in which miners and widows are losing compensation: (1) by having to pay attorney fees in many instances; (2) by not knowing their rights and thus losing all their compensation through failure to go after it; and (3) by not being able to prove their claims before the compensation referees. There is also a fourth way in which miners lose compensation. That is the loss of partial disability compensation. Under the Workmen's Compensation Act, if a worker is injured and returns to work at reduced earning power, he is entitled to 60 per cent of the difference between his wages before and after the accident up to a maximum of $12 a week. During my investigation in central Pennsylvania, however, I did not hear of a single case in which a miner was receiving partial compensation. The miners do not realize their rights in this regard, and, even if they did, it would be hard for them to get compensation because of the difficulty they would have in proving the exact extent of their loss of earning power.

The case of Joe Y. is an example of this kind of loss. I saw him and his wife and four little children twice at their little house in the Adrian Mining Camps and later verified what I found out there by going over the files of the Workmen's Compensation Board at Harrisburg. Mr. Y. was first injured December 14, 1916. In the words of the employer's report of the accident, signed by the compensation agent of the company, "he had set off two blasts in the coal the evening before which had left some of the coal hanging. He started to load a car when the balance of the loose coal fell, some of it striking him." Two ribs were broken and there were other complications which kept him away from work until October, 1917, up to which time he received compensation. In a supplemental report of the accident the compensation agent of the company answered the question asked on the blank form—"Has earning power been reduced as the result of the accident?" —by the word"No." Yet Mr. Y., who had been a coal miner earning fairly good money before his accident, was put to work in October, 1917, in the car shop at lower wages than the other day men because he was not strong enough to do a man's work. He told me that he had been promised partial compensation, but that he had never got it. There was no record of his having received it at Harrisburg. His wages when he went back to work were only 30 cents an hour. During the following year and a half when other wages were raised, his wages were raised to 41 cents, then to 44 and a fraction, then to 45 5-9 cents per hour, and these wages were by no means what the other day men were getting and much below what Mr. Y. would have received at the tonnage rate of his old occupation as coal loader or digger. He was making boy's wages while the other men were making the wages of war time and of the period immediately following the war. This condition, in which Mr. Y. was working at reduced earning power with no partial compensation, lasted for a period which lacked less than three months of being two years. On July 21, 1919, the unfortunate man strained his left side and back while lifting a car and he is now totally disabled and is receiving compensation. The partial disability compensation during the 91 or more weeks in which Mr. Y. was entitled to it, however, would have helped a great deal in making the family less miserable and the little children less hungry than they now are.

During the month that I spent investigating these conditions I located forty-five cases in which miners or the widows of miners were losing or had lost compensation that, it seemed to me, was rightfully theirs. Twenty-seven of the clearest cases of compensation loss have been written in detail and are now on file with the Bureau of Industrial Research.

The estimate of James Mark that the miners of District No. 2 lose

over half a million dollars a year in compensation was only an estimate, but I believe that a continued investigation similar to the one I made last spring would show that this figure is not too high.

CARL HOOKSTADT.—Dr. Downey has given an excellent analysis of the merits and demerits—particularly demerits—of the actual status of compensation legislation in the United States. I am in entire accord with every statement in his paper except perhaps that he has given a too rosy view of the efficiency of compensation administration by state commissions. It may be true, as Dr. Downey says, that "probably no branch of administration in this country is better conducted," but the administration of compensation laws in practically every jurisdiction leaves much to be desired. It is of little moment to enact a compensation law, broad in scope with a high scale of benefits, if the injured workers do not receive the benefits provided in the act. To secure for the workmen the benefits to which they are legally entitled it is essential not only that an administrative commission be provided, but that the commission have an adequate claim department with efficient follow-up methods. Inasmuch as the commissions in a large majority of injury cases base their decisions upon written reports furnished by employers, physicians, and insurance carriers, it is fundamental that these reports be accurate, and that they tell the whole story. It is unsafe to rely upon the employers' and carriers' statements as to the severity of an accident. Investigations made in New York, California, and Illinois have disclosed the fact that the nature of the injuries were systematically misrepresented, the severity of injuries underestimated, settlements made for less than the statutory scale, and many accidents were not even reported. The commissioners were unaware of this state of affairs until actual tests were made. Undoubtedly the same situation exists in a greater or less degree in every competitive compensation insurance state in the Union.

There are, however, two points which I should like to discuss—points not in criticism of Dr. Downey's paper, but rather emphasizing certain features not stressed by him. These two points are: (1) the theory upon which the basic compensation schedules are predicated, and (2) insurance.

Two principles have operated in determining the amount of compensation provided in various state laws, (1) loss of earning capacity, and (2) social need. In general it may be said that state workmen's compensation schedules are based upon loss of earning power modified both by the employee's need and by the desire to limit the employer's burden. Thus, the expression of compensation benefits in percentages of wages clearly shows that loss of wages was a determining factor, whereas the adoption of a sliding scale of benefits in accord-

ance with the number of dependents shows the effect of the social need factor. On the other hand, the desire not to burden the employer unduly finds expression in the limitations upon the amount of medical service, the weekly compensation payments, the periods during which compensation is to be paid, and finally upon the percentages of wages themselves.

The ideal compensation system in my judgment would be the following: charge the employer or industry with the entire economic or wage loss resulting from industrial injuries, but distribute the fund so collected according to the needs of the injured workers or their dependents. Such a system would bring about two desirable results; on the one hand, because of its greater cost, it would furnish a greater incentive for the employer to prevent accidents, the need for which was so eloquently pointed out by Dr. Downey; and on the other hand it would allow the benefits to be distributed according to the social and economic need of the beneficiaries. No benefits would be paid in case of a fatally injured workman without dependents, as is the custom now. The employer or industry, however, would be charged with the economic loss of every industrial death irrespective of whether there were any dependents. In case the deceased left no dependents his estate would receive no compensation except the necessary burial expenses, and the cost of his death which would be charged to the industry would become a part of the accumulated fund. This fund would be large enough not only to pay compensation to all beneficiaries according to their needs, but it would allow the commission to undertake adequate rehabilitation and safety work, the lack of which is one of the most serious weaknesses in compensation administration at the present time. It might be interesting to point out that the California Industrial Accident Commission has recently endeavored to have enacted into law a death benefit schedule embodying this principle. The California commission ascertained what it would cost to provide adequate compensation to dependents of those killed in industry. This cost was then to be allocated among all the industrial deaths irrespective of dependents. That is to say, every fatal accident would cost the employer or industry a certain definite amount, not governed by questions of dependency or wages.

Another controversial but important question in connection with workmen's compensation is the insurance problem. All except four of the state compensation laws provide that the employers under the act must secure their compensation payments either by insuring in an authorized private casualty company, or in a state insurance fund where such fund has been established, or carry their own insurance subject to certain conditions. Of the forty-two compensation states

seven[1] have exclusive or monopolistic state insurance funds, while nine[2] have competitive state funds. All except the exclusive fund states allow private carriers to write compensation insurance and in practically all except the exclusive fund states again permit self insurance under certain conditions. The superiority of one type of insurance over another has been the subject of considerable controversy for a number of years.

In response to numerous requests for information, the United States Bureau of Labor Statistics recently made an inquiry into the relative merits of different workmen's compensation insurance systems. The preliminary summary of the results of this investigation was published in the December, 1920, issue of the *Monthly Labor Review*. Three tests were applied—cost, service, and security. The question of cost concerns the employer primarily, while questions of service and security affect both employer and injured workmen.

The cost of compensation insurance to employers under different insurance systems may be indicated by their expense ratios. By expense ratio is meant the proportion of the administrative expenses, including acquisition costs, claim adjustments, inspection, taxes, etc., to earned premiums. The average expense ratio of stock companies is approximately 37½ per cent; of mutual companies, about 20 per cent; of competitive state funds, about 12½ per cent; and of exclusive state funds, from 5 to 7½ per cent. Under an exclusive state fund, therefore, the cost to employers would be 30 per cent less than under stock insurance and 12½ per cent less than under mutual insurance. The total saving to insured employers of the United States if all were insured in exclusive state funds, would be over $30,000,000 annually. This figure is obtained by applying the differences between the expense ratios of the exclusive state funds and stock and mutual companies to their respective annual premiums.

As regards service, comparisons are difficult because of the great variations among different insurance systems. As to promptness of payments, there is little to choose among the different types of insurance carriers. Some of the state funds have the best record while some have the poorest. The same thing may be said with respect to stock and mutual companies. However, a comparison of the best managed state fund with one of the best managed private companies shows that the best state fund is more prompt in its payments than the best private company. Another significant fact developed by the investigation is that self-insured employers, whom one would expect to pay promptly, are no more prompt in this respect than either state

[1]Nevada, North Dakota, Ohio, Oregon, Washington, West Virginia, Wyoming.

[2]California, Colorado, Idaho, Maryland, Michigan, Montana, New York, Pennsylvania, and Utah.

funds or private carriers. As regards liberality of payment, most of the state funds are more liberal in this respect than either stock or mutual companies. As regards accident prevention some of the private companies are doing excellent safety work, whereas few of the state funds have done any effective safety work.

Thus far no injured workman has lost one cent of compensation because of the insolvency of state insurance funds, nor has any large mutual company become insolvent. On the other hand, there have been several disastrous failures of private stock companies during the last three or four years. These failures have resulted in hundreds of thousands of dollars in unpaid claims. As regards self insurance, the experience of twenty-one states has been reported to the United States Bureau of Labor Statistics. In fifteen of these states no self-insured employer has failed or gone into the hands of a receiver; three states reported one failure each, and one state reported two failures, but in all these cases the compensation claims were paid either by the receiver or through security which had been deposited. Only two states reported failures—one small concern in each state—which resulted in several claims being unpaid.

Albert W. Whitney.—I have received the sanction of those who are responsible for the make-up of this program for devoting my remarks chiefly to a discussion of the accident prevention side of Workmen's Compensation. To exhibit this in its proper relations requires a background of theory with which I shall have to ask you to be patient. I believe this point of view is particularly worth presenting in full at this time, not only in order to clarify the situation in Workmen's Compensation, but as a background for tendencies which are increasingly to be seen in all lines of insurance.

Insurance has reached a stage in its development which is comparable to that point in the development of industry at which attention is directed to the utilization of by-products and to the importance of secondary effects.

The primary products in the slaughter of an animal are the meat and hide, and in the early and casual development of butchering this was all that was saved. Now, however, in large packing houses every bit of the carcass is used. The complete utilization of the by-products in the production of kerosene and gas is a matter of common knowledge.

A somewhat similar situation, and one which is even more closely analogous to the case of insurance, is the development of lumbering. The primary effect of cutting timber is the production of lumber, but the secondary effect is denudation of the ground and consequent floods. A more intensive application to the problem of producing

lumber requires a study of these secondary effects and some appropriate action such as reforestation.

Insurance has secondary effects which have been given little conscious consideration up to the present time, but which should now have attention. The primary object of insurance is to provide indemnity to offset the evil consequences of loss, and the effect upon the assured is relief from uncertainty. The primary result of relieving the assured of uncertainty is an ease of mind which forms the foundation for satisfactory personal and business relations. Neither business nor the life of the individual can be free to reach its greatest development when its foundations are insecure.

Along with this primary effect, which is wholly good, goes however a secondary effect which, while relatively less important, is, so far as it goes, wholly bad; I refer to the lessening of personal responsibility which accompanies this easement of the mind. If I know that my house is fully insured I shall not be quite so careful in carrying a lighted candle into the attic or in getting some unsafe condition in the electric wiring remedied. If I have liability insurance on my automobile I shall be somewhat more willing to have my son drive it even though I know he is an inexperienced driver. The possibilities in the way of an adverse secondary effect in insurance, however, go beyond mere carelessness into the field of actual criminality. If my automobile is well covered with fire insurance and I am in need of money, I may be tempted to burn it to secure the insurance.

It is evidently the duty of the insurance company and the public for the protection of both to see that this adverse secondary effect is reduced to the lowest possible terms; the first moves in this direction are, first, an insistence upon an insurable interest as a condition for recovery and, second, the avoidance of over-insurance. When, however, these two obviously proper conditions are met we come back to the effect of that general lessening of personal responsibility that insurance brings with it. Fortunately this is not nearly as important as it might be, because of the fact not merely that insurance does not cover the whole of the value, but that there are values of a wholly different character which in the nature of things cannot be covered. I refer to what may be called sentimental values. My home has a sentimental value to me that is outside the range of insurance, and my family, and I myself, have an interest in my life which is quite outside of its earning value. This sentimental value has had the effect of so minimizing the adverse effects of insurance that these adverse effects have largely escaped attention.

Now, however, we have distinctly come to an era in the world, and in this country in particular, when the by-product and the secondary effect must be taken into account. The margin of profit today lies

wholly in that field. This is the age of the multiple-cylinder engine, of conservation, and of the efficiency expert. The first rush when only the primary product and the primary effect were of importance has passed and an era has come in which the field must be more carefully gleaned.

In the field of insurance then the case stands as follows: insurance is an instrument with a primary effect, wholly good, of relieving uncertainty and preventing the effects of misfortune, and with a secondary effect, wholly bad so far as it goes, of decreasing individual responsibility and opening the door to possible fraud. What, under the urge of this increased modern sensibility to secondary effects, should be our reaction to this adverse quality in insurance?

I venture to assert the thesis that the public welfare demands that the operation of insurance shall not decrease the sum-total of individual responsibility. This is only asking insurance to clean up whatever bad conditions it has itself produced. It has produced a marvelous new order in which the complexities of modern life and business can be carried on in comparative security, but in doing so it has shaken the foundations of personal responsibility and opened the door to abuse. The public, even granting that what is good in insurance far outweighs what is bad, may nevertheless properly say to the insurance companies that their duty does not end when they have developed to the greatest possible extent the positive, helpful effects of insurance, but that they must also do all in their power to minimize its evil effects.

The implications of this public admonition to look after its secondary effects are significant. The way in which insurance solves the primary problem of relieving uncertainty is by mass-action, by grouping a large number of risks together and thus securing the working of the law of averages. The secondary problem must be solved in the same way, that is, by mass-action. It is impossible to replace individual responsibility on the basis of immediate self-interest; that is gone; the best that the insurance company can do is to substitute something else for personal responsibility and since it has already associated many risks together for the sake of securing an average it may very naturally take advantage of that fact to institute preventive actions of a collective nature whose sum-total will be equivalent to the sum-total of the personal responsibility that has been lost.

There are various activities of a collective nature, their character depending upon the particular type of insurance concerned, that can be carried on by the insurance carrier to prevent loss; for instance, the excellent survey of conflagration conditions in the cities of the country by the National Board of Fire Underwriters, the standardization work of the National Fire Protection Association and of the

Underwriters Laboratories, the excellent work in factories of the New England Mill Mutuals, the nursing and tuberculosis work of the Metropolitan Life Insurance Company and of the German social insurance system. Each of these has either largely or completely made up for the effect of lessened personal responsibility among the assured; each of these is a piece of work that is possible only through collective action, and furthermore there is no agency which so naturally can undertake this work as the insurance carrier because the insurance carrier already has intimate relations with the assured and its interest is recognized to be direct and immediate.

Such activities as these are already in operation. All that I desire to do is to show that such activities are a logical and necessary corollary to the concept of insurance, that the institution of insurance is not a complete social instrument, not merely not adequate for work that needs to be done, but not complete in the sense of fulfilling its own intrinsic nature, until it makes use of mass-action not merely in averting the evil effects of misfortune but in preventing the misfortune itself. I believe the public may rightly insist for its own protection that the insurance carriers take this larger view of their responsibilities.

Insurance may thus become not merely one of the great fiduciary and distributive agencies of the country but one of the great conservators. Intermediate between the direct self-interest and personal responsibility of the individual and the action of the state for the benefit of its citizens will come this organized effort of the insurance companies, substituting mass-action for the individual efforts of its policyholders but yet more immediately controlled and inspired by self-interest than in the case of state action. With greater flexibility than state action and with greater power than individual action, with the theoretical effectiveness of socialism but without its dangers and practical inefficiency, the conservational activities of insurance may turn out to be as important an instrument in the organization of our life as its present distributive activities.

I have not undertaken to differentiate between the preventive possibilities in the various lines of insurance. This is not the place to do this in detail; in passing, however, I may acknowledge that the problem is very different in different fields. The intrinsic value of living and the distaste for pain are sufficient to make the secondary effects in life insurance and in workmen's compensation relatively much less important than in fire insurance, for instance, where the consequent loss of personal responsibility may be one of the largest contributory items in the make-up of the hazard, of such magnitude in fact that it will be a serious question whether preventive activities are feasible which will be a complete offset.

It is evident that in the last analysis insurance must be judged by its net effects; the good results of insurance in the elimination of uncertainty appearing on one side of the ledger and the results of lessened personal responsibility on the other. A more accurate formulation of my thesis would then be that the public welfare demands that this debit side be reduced to the greatest extent possible, and even where feasible turned into a credit. In some cases even with the best endeavor there may remain a debit item; in other cases this may be converted by the preventive work of the company into a credit so that in that case insurance both in its primary and secondary effects will be a positive public benefit.

One of the ear-marks of a correct solution or of a truly fundamental development is the fact that it clears up a larger field than that for which it was designed. That is the case here. The preventive activities of insurance are not only good theory but good business. The saving to be had is far greater than the expense involved. It is on this basis that the already very considerable developments in this field have been carried on.

In this connection I may point out, however, one more practical consideration which is not obvious at first sight. If the rates for insurance become too high an adverse selection takes place; there will be a tendency for the careful not to insure and the average character of the insured risk will deteriorate. This will immediately show itself in a bad experience and it will drive the rates still higher, and so on in a vicious circle. There is no way of breaking this circle from the inside except in a limited field where a compensatory selection is possible; that is, in general, insurance in its purely fiduciary and distributive capacity is helpless. The circle must be broken from the outside, that is, by bringing the preventive forces of insurance to bear upon the problem. Insurance for its own best interests and for the continuance of its existence must adopt preventive measures.

I may now connect this with the subject in hand. There is so little in Dr. Downey's paper that I have to disagree with, and that I can do other than commend, that my function is rather to pick up the loose ends of the program. One of these is prevention; it is not enough to consider workmen's compensation merely as compensation; workmen's compensation must bring about prevention or it is a failure. In the last analysis the fundamental question is what workmen's compensation has done to decrease industrial accidents.

What I have had to say with regard to the place of prevention in insurance applies to a very considerable degree to workmen's compensation even though there be no insurance system underlying it. For the shifting of the financial responsibility for accidents from the employee to the employer has the essential characteristics of insurance.

It measurably relieves the workman of uncertainty and of the evil effects of accidents. It places this responsibility upon the employer, and the very fact that he has a number of employees provides to a degree for the working of the law of averages and makes it feasible for him to institute action of a preventive nature which will be collective so far as his employees are concerned.

In some cases the particular plant is so large that for practical purposes it may be safely taken as an insurance unit; this is then self-insurance. In most cases, however, the number of employees is not large enough to yield a wholly dependable average and the employer seeks outside insurance, which has the effect of increasing the field over which the losses are spread.

In both cases, however, the general tendencies are the same, and the line of reasoning that has been developed can be applied. The very fact, for instance, that the law now places the responsibility for accidents upon the employer may to a certain limited extent develop a carelessness among the employees as well as a tendency to malinger. The compensation law looked at as an assurance of indemnity by the employer to the employee may well as a corollary, therefore, carry with it a compulsion to be exerted by the state upon employers to institute preventive action in their plants. As a matter of fact, exactly this has happened in a number of states. The minute that the obligation of the employer is fixed to pay compensation that minute he also becomes obligated, if not under the law then by equity, to prevent so far as he is able the accidents that the law requires him to compensate.

The situation is not fundamentally changed when there is insurance. To the extent to which the employer through insurance is relieved of responsibility to that extent the insurance company is obligated on the grounds of public equity to prevent so far as possible the accidents that it insures against.

I have purposely emphasized the fundamental equities of the situation rather than the hard business sense which underlies preventive action. But in passing I may say that the whole development of the rating feature of workmen's compensation insurance has given an enormous impetus to the prevention of accidents as a sound business policy. The nub of this lies first in the development of rates that so far as is humanly possible will exactly fit the hazard of each individual risk, and secondly in correlating these rates with the conditions and experience in the plants, first in as great detail as possible and secondly with the greatest possible clarity. When this has been done it means that the employer will be shown exactly where and how his accidents occur, exactly what effect certain accident-producing causes have upon his rate and exactly how much he can reduce his rate by

removing these malign conditions. Such rating as this acts as an incessant economic stimulus upon the employer to improve his plant.

As you have realized, the general tendency of my remarks has been in the direction of prevention because I have felt that the program was deficient in this respect; but at this point it is evident that what I have to say connects immediately with the subject of Mr. Verrill's paper, for the development of the statistics of accidents both as to nature and number and severity and cause provides the material for the type of rating system that I have described and, therefore, acts strongly in the direction of prevention.

In passing also may I refer to the very great accomplishments in the workmen's compensation field during the last ten years. I can thoroughly agree with Dr. Downey as to the things that still need to be done, and it is well on such an occasion as this to stress these; but, nevertheless, the progress during these first ten years of compensation has been remarkable. And this has been particularly so in the field of rating. Workmen's compensation probably presents greater difficulties in rating than any other ordinary type of insurance; it has all the complications of life insurance and of fire insurance and then some more of its own. There is much more to be done in making rates right, but, nevertheless, the main features of the problem have been solved and solved in such a way as to be already a most valuable instrument for accident prevention.

It is not an easy matter to make a statistical estimate of what has been accomplished by workmen's compensation in the prevention of industrial accidents, for the conditions themselves have been changing. It is much simpler to state what is possible and what has actually been accomplished in individual cases. It can safely be said that it is entirely feasible without departing from a sound economic basis to cut the cost of accidents (including the lowering of industrial efficiency) in the average industrial plant in two. I admit that this is an ideal that has not been generally attained and yet more than this has been accomplished in hundreds of plants. The net annual saving of the United States Steel Corporation in accident cost, after the cost of its safety work has been taken out, is stated by it to be a million dollars a year. It is not an uncommon thing for a plant to get a credit of 40 to 50 per cent in its insurance rate on the basis of its actual experience. Most of what has been accomplished can be credited to workmen's compensation either directly or indirectly. The problem of the future is how to extend this preventive action into all corners of the field and into all plants however small, and how to push it still further and make it permanent without at any time getting away from a sound economic basis. And, if I may again emphasize the thesis of this paper, this is largely a problem of insurance and very distinctly a problem of workmen's compensation.